

**REMARKS**

Upon entry of the present Amendment, claims 2-8, 10, 13-21, 26-27, 29-30 and 62-74 are all the claims pending in the application, with claim 10 being recited in independent form. Claims 2-8, 10, 62, 68 and 69 are amended, and new claims 70-74 are added. No new matter is presented.

To Summarize the Office Action, claims 2-8, 10, 13-21, 26-27, 29-30 and 62-29 have been provisionally rejected on obviousness-type double patenting grounds, claims 2-8, 10, 13-21, 26-27, 29, 62 and 68-69 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Corrsin (U.S. Patent No. 3,477,194), claims 2-8, 10, 13-21, 27, 29, 62 and 67-69 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Muellich (U.S. Patent No. 5,893,959), claims 63-67 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corrsin in view of Osborne (U.S. Patent No. 4,069,080), and claims 26, 30 and 63-66 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Muellich in view of Osborne.

Further, in the Advisory Action of June 5, 2006, the Examiner contends that the Amendment of May 19, 2006 was not entered because new issues were presented that require further consideration and/or search. Accordingly, Applicant resubmits the previous claim amendments in the present Amendment with a Request for Continued Examination.<sup>1</sup>

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<sup>1</sup> Applicant notes that new claims 71-74 are newly presented in the present Amendment.

In addition, Applicant notes that the Examiner apparently alleges in the Advisory Action that the claim amendments in the previous Amendment present new matter. In particular, the Examiner asserts that “the specification does not appear to disclose an organic dye.” To the extent that the Examiner may rely on this rationale in considering the present Amendment, Applicant respectfully traverses and submits that at least the discussion at page 3 of the Specification regarding cyanine dyes, squarylium dyes, and croconium dyes, which are organic dyes, supports “radiation absorbing organic dye”, as recited by the pending claims.

Further, Applicant respectfully traverses the outstanding grounds of rejection set forth in the Final Office Action, as discussed below.

#### **Obviousness-Type Double Patenting Rejection**

Claims 2-8, 10, 13-21, 26-27, 29-30 and 62-29 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over co-pending Application No. 10/66,264.

Applicant notes that a Terminal Disclaimer was previously filed with respect to U.S. Patent Application No. 10/666,264 in the present Application on May 6, 2005. Thus, the double patenting rejection is believed to have been obviated by virtue of the previously filed Terminal Disclaimer. Accordingly, withdrawal of the provision obviousness-type double patenting rejection is respectfully requested.

**Claim Rejections - 35 U.S.C. § 102**

Corrsin

Claims 2-8, 10, 13-21, 26-27, 29, 62 and 68-69 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Corrsin. Applicant respectfully traverses and submits that Corrsin fails to teach all the limitations of these claims, as evidenced by the following.

With respect to independent claim 10, Applicant notes that claim 10 defines a method of forming a weld between plastics workpieces over a joint region, which comprises, *inter alia*, exposing the joint region to incident radiation having a wavelength outside the visible range so as to cause melting of the surface of one or both workpieces at the joint region, and allowing the melted material to cool thereby welding the workpieces together. In addition, claim 10 recites the feature of providing a *radiation absorbing organic dye* at the joint region in one of the workpieces or between the workpieces which has an absorption band *matched to the wavelength of the incident radiation* so as to absorb the incident radiation and generate heat for the melting process. As further recited by claim 10, the radiation absorbing organic dye is visually transmissive after welding.

Corrsin, however, teaches a welding process in which *carbon* is used as an infrared absorber. See, Corrsin at col. 1, line 40; col. 2, line 35. However, carbon is *opaque* to visual wavelengths. Thus, in contrast to the radiation absorbing organic dye of claim 10, the carbon of Corrsin is not visually transmissive after welding of the joint region by exposure to the incident radiation.

Further, although Corrsin mentions radiation absorbers other than carbon, Corrsin does not disclose a radiation absorbing organic dye that absorbs incident radiation and generates heat for the melting process, as recited by claim 10. In this regard, Applicant notes that Corrsin teaches the use of gypsum as a selective absorber. *See*, Corrsin at col. 4, lines 6-31. However, gypsum, i.e., calcium sulfate, is a *solid white pigment*, and is therefore, neither an organic dye, as recited by claim 1, nor is the gypsum visually transmissive.

Moreover, Corrsin does not disclose *organic dyes* as radiation absorbers which are *matched* to the wavelength of incident radiation. Indeed, the carbon of Corrsin could not reasonably be considered to be matched the incident radiation because carbon exhibits high extinction coefficients in both the visible *as well as* the near infrared regions. Further, the carbon and gypsum are inorganic compounds, and could not correspond to a radiation absorbing organic dye, as recited by claim 10.

As noted above, claim 10 recites a radiation absorbing organic dye provided at the joint region and further recites the radiation absorbing organic dye is visually transmissive after welding. Corrsin does not disclose a radiation absorber having both these properties and further fails to disclose the claimed matching of the radiation absorbing organic dye to the wavelength of the incident radiation.

Accordingly, at least for the foregoing reasons, Corrsin fails to anticipate all the features of claim 10, and reconsideration and withdrawal of the rejection of claim 10 is requested. With respect to claims 2-8, 13-21, 26-27, 29, 62 and 68-69, Applicant submits that these claims are allowable at least by virtue of depending from claim 10.

Muellich

Claims 2-8, 10, 13-21, 27, 29, 62 and 67-69 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Muellich. Applicant likewise traverses this ground of rejection and submits that Muellich fails to teach or suggest all the limitations of these claims, as demonstrated below.

For instance, Muellich teaches the use of laser welding to join workpieces together to produce a resultant structure that provides a “homogenous visual impression, in particular with regard to color.” *See*, Muellich at col. 2, lines 18-21. However, as discussed in the previous Amendment of August 15, 2005, the laser welding taught by Muellich involves providing suitable additives to both “workpiece parts” to be welded such that: a) with respect to infrared radiation, one of the workpieces is substantially transparent while the other is substantially absorbent, as described at col. 2, line 64 - col. 3, line 3, and b) with respect to the visible wavelength range, the additives are impermeable to light rays so that the resulting structure provides a substantially homogeneous visual impression by virtue of the workpieces being *opaque* to visible light, as described at col. 3, lines 3-7 and col. 9, lines 19-21.

In the Office Action, the Examiner asserts that “Muellich discloses: ‘After welding, the individual workpiece parts are substantially no longer distinguishable by the human eye.’” *See*, Final Office Action at page 6. However, Applicant respectfully submits that this isolated passage does not reasonably suggest that the “additives” of Muellich are visually transmissive after welding, as recited by claim 10. Rather, as pointed out above, Muellich merely teaches that the resulting structure has a substantially homogeneous visual impression by virtue of *opaque*

workpieces, which is inconsistent with a radiation absorbing organic dye that is *visually transmissive* after welding.

Further, Applicant disagrees with the Examiner's paraphrasing of Muellich as allegedly disclosing welding of workpieces that may be opaque, colored with dye, or transparent. To the contrary, Muellich teaches that both workpieces would be rendered opaque and black through the use of carbon as the radiation absorbing material. Moreover, Applicant respectfully disagrees with the Examiner's characterization of Muellich as teaching "proportion of the workpiece are joined in the visible region and dye pigment may be used for joining." *See* Final Office Action at page 4. As discussed above, Muellich teaches the use of carbon as the radiation absorber, which is not visually transmissive.

Moreover, Muellich likewise fails to suggest a radiation absorbing *organic dye* that is *matched* to the wavelength of the incident radiation, as recited by claim 10. Indeed, the Examiner does not appear to address the feature of matching to the wavelength of the incident radiation in the prior Office Action.

Thus, for at least the foregoing reasons, Muellich fails to teach or suggest all the features of claim 10, and reconsideration and withdrawal of the rejection is requested. Further, Applicant submits that claims 2-8, 13-21, 27, 29, 62 and 67-69 are allowable at least by virtue of depending from claim 10.

### **Claim Rejections - 35 U.S.C. § 103**

As noted above, claims 63-67 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Corrsin in view of Osborne, and claims 26, 30 and 63-66 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Muellich in view of Osborne.

Without commenting substantively, Applicant submits that these claims are allowable at least by virtue of depending from claim 1, respectively. Accordingly, reconsideration and withdrawal of the rejection of claims 26, 30 and 63-67 is respectfully requested.

### **New Claims**

In order to provide additional coverage merited by the scope of the present invention Applicant is adding new claims 70-74. Applicant submits that claims 70-74 are allowable at least by virtue of depending from claim 10 and by virtue of the features recited therein.

### **Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.114(c)  
Application Serial No. 09/806,613  
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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